



**UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/430,973	11/01/99	CARR	P04255US0

DONALD H ZARLEY  
ZARLEY MCKEE THOMTE  
VOORHEES & SEASE PLC  
801 GRAND AVENUE SUITE 3200  
DES MOINES IA 50309-2721

MM91/1222

EXAMINER

MCELHENY JR, D

ART UNIT

PAPER NUMBER

2862

DATE MAILED: 12/22/00

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

# Office Action Summary

Application No.

09/430,973

Applicant(s)

CARR ET AL.

Examiner

Donald E. McElheny, Jr.

Art Unit

2862

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

## Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 18) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other:

Art Unit: 2862

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over admitted prior art as stated in applicants' own specification.

Applicants' specification states on page 1 that the use of global positioning systems (GPS) were known to be used for identification of plots of farm crops. On page 3 is stated "a conventional farm tractor 24 and a research planter 26 are used", where the prior art "planter 26 includes a computer 28 which is operatively connected by conventional means to a GPS receiver 30 so that as each seed is deposited in the soil of a row, a global position of the planted seed is instantaneously determined." Also is stated that the "research planter 26 can have a sensor (not shown), e.g., a photocell, to monitor the dropping of each seed whereupon a signal is transmitted

Art Unit: 2862

to the computer 28 or GPS 30 to trigger a location reading to be stored in the memory of the computer. More specifically, when the first plot is manually tripped, the computer 30 (sic?) uses vector information and determines the next tripping location. The computer 30 has a program that allows entry of data as to the row length and alley width so that the system could calculate the next plot location from the original planter trip." Note the inconsistency in reference numbering. Applicants are apparently discussing the features of the admitted well known prior art equipment. If not, then applicants' specification is insufficient to support any operative and adequately disclosed structural embodiments to support any sensor detection structure for each seed dispensed, and also fails to provide any computer program or flowchart to support any invention of their own as far as the admitted use of "the program" of "the computer 30". Since applicants require such structures and programs for their own invention and fail to disclose such features to the degree necessary for any inventive disclosure purposes, then inherently such features must be based upon notoriously well known prior art structures and programs. Which applicants' admissions apparently are so relying upon when discussing prior art components. The written specification continues with additional admissions of the known prior art farming equipment. Thus if applicants' admitted well known prior art farming equipment is that which is being used which already has this supportive equipment for use for such intended purposes, applicants' claims and claimed features appear to state no more than that which must also be what is the admitted prior art being used for its admitted prior art purposes.

Art Unit: 2862

Furthermore, it was notoriously well known as GPS was being incorporated into farming practices, such as commonly termed phrases such as Precision Agriculture, or Prescription Farming, that the application of GPS and the accuracy of monitoring any aspect of farming will only be limited by the accuracy that the GPS satellite system provides. That accuracy of which was limited by scrambling for military security purposes and which more recently has been removed and opened up for much greater positioning accuracy. The degree of monitoring crop plants is thus an inherent arbitrary choice to the degree one skilled in the art desires to apply the well known GPS techniques of tracking each farm crop as it proceeds from soil preparation, plant/seed planting, plant growth monitoring, and plant harvesting. Such practices, and their associated problems in accuracy, were of such notoriously well known practice in the agricultural fields that no specific prior art is deemed necessary to even be cited to cover and meet such broad claims as the instant application submits, and Official Notice is so given.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Art Unit: 2862

4. Claims 1-5 are rejected under 35 U.S.C. 102(a), (b) & (e) as being clearly anticipated by Nakamura (5,438,817).

The monitoring of the position of planting, maintenance, and harvesting of a crop using GPS positioning techniques, including type of crop at a location and its growth and health conditions, was well known at the time of filing of the instant application.

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. The disclosure is objected to under 35 U.S.C. 112, first paragraph, as being insufficient and non-enabling to support the appended claims.

7. Claims 1-5 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The claims amount to stated desired results relating to positioning accuracies which are not disclosed how they are accomplished.

The disclosure lacks a sufficient and enabling disclosure to support the degree of accuracy applicants claim as far as use of GPS to determine the exact position of each seed or plant. If applicants are using existing prior art equipment which would enable such accuracy, then still applicants have not disclosed which of such prior art equipment or systems are used to accomplish applicants' claimed and disclosed desired results. Also, if such are existing prior art techniques

Art Unit: 2862

then inherently it would appear they would meet the claims. Since the positional accuracy determination of a specific crop plant, or any object for that matter, is understood to have inaccuracies for reasons even when the accuracy of a GPS is even considered to be definite, the accuracy of a specific GPS system would also not necessarily be of sufficient nature to be enabling because the particular farming components and how they cooperate with the GPS locating equipment are of critical import to enable such an accurate position determination of a seed or plant. Such reasons being that the farming equipment varies in angular position due to hills, furrows height variations, and the different parts of the farming vehicle equipment varying in position relative to the GPS measuring device. See the cited prior art for examples of discussions of such crop plant position accuracy problems and some solutions.

8. The remaining prior art is cited of material pertinence to various teachings in the use of GPS positioning to determine locations of crops and mapping thereof of farm fields, and the operation of equipment using the GPS system to assist in crop related activities. These references are considered to also be of sufficient teaching to meet the broad claims.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald McElheny Jr., whose telephone number is (703) 305-3894.

Fax transmissions may be directed to (703) 308-7724.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0956.

  
**DONALD E. McELHENY, JR.**  
**PRIMARY EXAMINER**